

# EXHIBIT B

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**Patent Claims Analysis**

**of**

**US10021380: "Faster state transitioning for continuous adjustable 3Deeps filter spectacles  
using multi-layered variable tint materials"**

**against**

**Qualcomm Vision Intelligence Platform**

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**US10021380B1**

**United States**

Inventor **Kenneth Martin Jacobs, Ronald Steven Karpf**

Current Assignee **Vdpp LLC Visual Effect Innovations LLC**

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Worldwide applications

2017 **US US** 2018 **US**

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Claims priority from a provisional application

01/23/2001

Expired

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Total patentTerm Adjustments

0

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## CLAIMS

1. A method for generating modified video, the method comprising:

acquiring a source video comprising a sequence of image frames, each of the image frames being associated with a respective chronological position in the sequence;

identifying a first image frame associated with a first chronological position in the sequence of the source video and a second image frame associated with a second chronological position in the sequence of the source video;


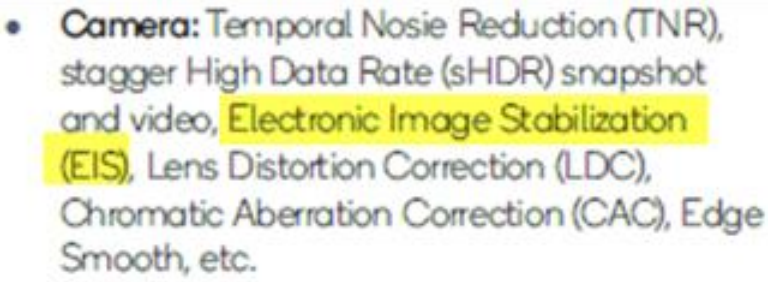
expanding the first image frame to generate a modified first image frame, wherein the modified first image frame is different from the first image frame;

expanding the second image frame to generate a modified second image frame, wherein the modified second image frame is different from the second image frame;


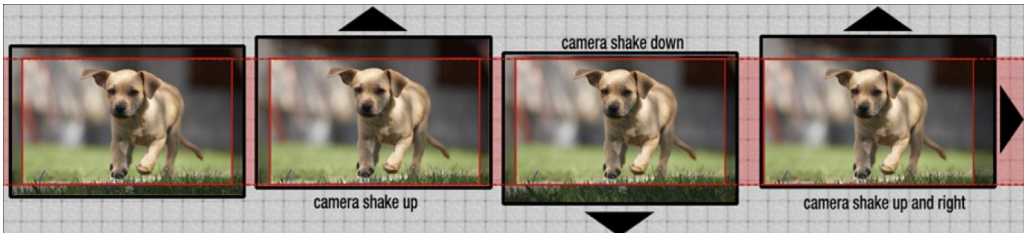
combining the modified first image frame and the modified second image frame to generate a modified combined image frame, the modified combined image frame having first and second opposing sides defining a first dimension and third and fourth opposing sides defining a second dimension; and

displaying the modified combined image frame.

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Row	Claim Element	Contention
1.0	1. A method for generating modified video, the method comprising:	<p><i>Qualcomm Vision Intelligence Platform</i> implements the Method of Claim 1.</p>  <p>Qualcomm Snapdragon 625 IP Camera</p> <p>&lt;<a href="https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf">https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf</a>&gt;</p> <p>© 2019</p>
1.1	acquiring a source video comprising a sequence of image frames, each of the image frames being associated with a respective chronological position in the sequence;	<p><i>Two consecutive image frames are read in from storage for acquisition.</i></p> <p><i>[Note: This is necessary in order to do <b>Electronic Image Stabilization (EIS)</b>.]</i></p>  <p>&lt;<a href="https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf">https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf</a>&gt;</p> <p>© 2019</p>
1.2	identifying a first image frame associated with a first chronological position in the sequence of the source video and a second image frame associated with a second chronological position in the sequence of the source video;	<p><i>Two consecutive image frames are read in from storage for identification.</i></p> <p><i>[Note: This is necessary in order to do <b>Electronic Image Stabilization (EIS)</b>.]</i></p>

		<ul style="list-style-type: none"> <li>• <b>Camera:</b> Temporal Noise Reduction (TNR), stagger High Data Rate (sHDR) snapshot and video, <b>Electronic Image Stabilization (EIS)</b>, Lens Distortion Correction (LDC), Chromatic Aberration Correction (CAC), Edge Smooth, etc.</li> </ul> <p>&lt;<a href="https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf">https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf</a>&gt; © 2019</p>
1.3	expanding the first image frame to generate a modified first image frame, wherein the modified first image frame is different from the first image frame;	<p><i>The first image frame is expanded (scaled) to generate a modified first image frame.</i></p> <p><i>Since the modified first image frame is expanded from the first image frames - they are different.</i></p>
1.4	expanding the second image frame to generate a modified second image frame, wherein the modified second image frame is different from the second image frame;	<p><i>The second image frame is expanded (scaled) to generate a modified second image frame.</i></p> <p><i>Since the modified second image frame is expanded from the second image frames - they are different.</i></p>
1.5	combining the modified first image frame and the modified second image frame to generate a modified combined image frame,	<p><i>Qualcomm Vision Intelligence Platform combines the modified (scaled) first and second image frame, and combines them - generating a modified combined image frame (which is the <b>Electronic Image Stabilization (EIS)</b> frame).</i></p> <ul style="list-style-type: none"> <li>• <b>Camera:</b> Temporal Noise Reduction (TNR), stagger High Data Rate (sHDR) snapshot and video, <b>Electronic Image Stabilization (EIS)</b>, Lens Distortion Correction (LDC), Chromatic Aberration Correction (CAC), Edge Smooth, etc.</li> </ul> <p>&lt;<a href="https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf">https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf</a>&gt; © 2019</p>
1.6	the modified combined image frame having first and second opposing sides defining a first	<p><i>The implication of this clause is that the image displayed is a rectangle.</i></p>

	dimension and third and fourth opposing sides defining a second dimension; and	 <p>&lt;<a href="https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf">https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/vision-intelligence-100-200-product-brief_87-pg761-1-d_0.pdf</a>&gt; © 2019</p> <p><i>This means the screen opposing sides are of equal dimension (the display screen is rectangular in shape).</i></p>
1.7	displaying the modified combined image frame.	<p><i>The modified combined image frame is displayed. (i.e., the <b>Electronic Image Stabilization (EIS)</b> video frame is displayed.)</i></p>
		<p><u>Note 1: Image Stabilization</u> (or Real-time Digital Image Stabilization (DIS), also called Electronic Image Stabilization (<b>EIS</b>)) is used to counteract movement. This technique shifts the electronic image from frame to frame of video, enough to counteract motion.</p> <p>This is Image Stabilization in pictures - -</p>  <p>Image Stabilization:</p> <ol style="list-style-type: none"> <li>(1) Reads in consecutive video images to decide how to crop the frames based on information in consecutive frame, and;</li> <li>(2) <b>Up-scales</b> the cropped frames to the desired resolution for display.</li> </ol> <p><u>Note 2:</u> Not all displays are rectangular in shape. For instance, projector displays are not rectangular in shape.</p>